

GENERAL STRUCTURAL NOTES

(The following apply unless shown otherwise on the plans)

CRITERIA

1.

ALL MATERIALS, WORKMANSHIP, DESIGN, AND CONSTRUCTION SHALL CONFORM TO THE DRAWINGS, SPECIFICATIONS, AND THE INTERNATIONAL BUILDING CODE (2006 EDITION).
2.

DESIGN LOADING CRITERIA

PEDESTRIAN LIVE LOAD

100 PSF

WIND

85 MPH, EXPOSURE "C"  
METHOD 1

EARTHQUAKE

PER BRIDGE MANUFACTURER
3.

STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH ARCHITECTURAL AND ALL OTHER DISCIPLINES' DRAWINGS FOR BIDDING AND CONSTRUCTION. CONTRACTOR SHALL VERIFY DIMENSIONS AND CONDITIONS FOR COMPATIBILITY AND SHALL NOTIFY KING COUNTY PROJECT REPRESENTATIVE OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.

DISCREPANCIES: THE CONTRACTOR SHALL INFORM THE KING COUNTY PROJECT REPRESENTATIVE IN WRITING, DURING THE BIDDING PERIOD, OF ANY DISCREPANCIES OR OMISSIONS NOTED ON THE DRAWINGS OR IN THE SPECIFICATIONS OR OF ANY VARIATIONS NEEDED IN ORDER TO CONFORM TO CODES, RULES AND REGULATIONS. UPON RECEIPT OF SUCH INFORMATION, THE PROJECT REPRESENTATIVE WILL SEND WRITTEN INSTRUCTIONS TO ALL CONCERNED. ANY SUCH DISCREPANCY, OMISSION, OR VARIATION NOT REPORTED SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, AND WORK SHALL BE PERFORMED IN A MANNER AS DIRECTED BY THE PROJECT REPRESENTATIVE.
4.

CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS, MEMBER SIZES, AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS ARE INTENDED AS GUIDELINES ONLY AND MUST BE FIELD VERIFIED BY THE CONTRACTOR OR THE CONTRACTOR'S SUBCONTRACTOR.
5.

CONTRACTOR SHALL PROVIDE TEMPORARY BRACING FOR THE STRUCTURE AND STRUCTURAL COMPONENTS UNTIL ALL FINAL CONNECTIONS HAVE BEEN COMPLETED IN ACCORDANCE WITH THE PLANS.

ERECTION PLANS AND DETAILS OF SHORING SYSTEMS SHALL BE PROVIDED BY THE CONTRACTOR. DESIGN CALCULATIONS AND DRAWINGS ARE TO BE STAMPED BY A LICENSED ENGINEER IN THE STATE OF WASHINGTON. TWO SETS OF CALCULATIONS AND DRAWINGS ARE TO BE SUBMITTED TO THE PROJECT REPRESENTATIVE FOR REVIEW. THIS CURSORY REVIEW WILL CHECK WHETHER THE CONTRACTOR'S ENGINEER HAS COMPLETED THE LOAD PATH TRANSFERING ALL THE BUILDING'S DEAD LOADS AND CONSTRUCTION LIVE LOADS DOWN TO NATIVE SOILS. THE SHORING SHALL NOT BE SUPPORTING ON THE EXISTING STRUCTURE.

CHANGES IN FIELD CONDITIONS DURING CONSTRUCTION WILL REQUIRE RE-EVALUATION BY THE CONTRACTOR'S SHORING ENGINEER.
6.

CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAFETY PRECAUTIONS AND THE METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES REQUIRED TO PERFORM THE WORK.
7.

CONTRACTOR-INITIATED CHANGES SHALL BE SUBMITTED IN WRITING TO THE KING COUNTY 7 KING COUNTY PROJECT REPRESENTATIVE FOR APPROVAL PRIOR TO FABRICATION OR CONSTRUCTION. CHANGES SHOWN ONLY ON SHOP DRAWINGS WILL NOT SATISFY THIS REQUIREMENT.
8.

DRAWINGS INDICATE GENERAL AND TYPICAL DETAILS OF CONSTRUCTION. WHERE CONDITIONS ARE NOT SPECIFICALLY INDICATED BUT ARE OF SIMILAR CHARACTER TO DETAILS SHOWN, SIMILAR DETAILS OF CONSTRUCTION SHALL BE USED, SUBJECT TO REVIEW AND APPROVAL BY THE KING COUNTY PROJECT REPRESENTATIVE.
9.

ALL STRUCTURAL SYSTEMS WHICH ARE TO BE COMPOSED OF FIELD ERECTED COMPONENTS SHALL BE SUPERVISED BY THE SUPPLIER DURING MANUFACTURING, DELIVERY, HANDLING, STORAGE AND ERECTION IN ACCORDANCE WITH INSTRUCTIONS PREPARED BY THE SUPPLIER.
10.

SHOP DRAWINGS FOR  
REINFORCING STEEL  
PRE FABRICATED BRIDGE STRUCTURE

SHALL BE SUBMITTED TO THE KING COUNTY PROJECT REPRESENTATIVE FOR REVIEW PRIOR TO FABRICATION OF THESE ITEMS.

CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND DETAILS DRAWN BY THE FABRICATOR. SHOP DRAWINGS SHALL BE MINIMUM 24" x 36" SHEETS (HALF SIZE SETS ACCEPTABLE). COPIES OF THE STRUCTURAL DRAWINGS WILL NOT BE ACCEPTED.
11.

SHOP DRAWING REVIEW: DIMENSIONS AND QUANTITIES ARE NOT REVIEWED BY THE KING COUNTY PROJECT REPRESENTATIVE, THEREFORE MUST BE VERIFIED BY THE CONTRACTOR. CONTRACTOR SHALL REVIEW AND STAMP ALL SHOP DRAWINGS PRIOR TO SUBMITTING FOR REVIEW BY ENGINEER OF RECORD. SUBMISSIONS SHALL INCLUDE A REPRODUCIBLE AND ONE COPY. REPRODUCIBLE WILL BE MARKED AND RETURNED. FOLLOWING CONTRACTOR REVIEW AND APPROVAL, SHOP DRAWINGS SHALL BE SUBMITTED TO THE KING COUNTY PROJECT REPRESENTATIVE ALLOWING FOR A TURN AROUND TIME OF AT LEAST 14 DAYS.

RESUBMITTALS OF PREVIOUSLY SUBMITTED SHOP DRAWINGS SHALL HAVE ALL CHANGES CLOUDED AND DATED WITH A SEQUENTIAL REVISION NUMBER. CONTRACTOR SHALL REVIEW AND STAMP ALL REVISED AND RESUBMITTED SHOP DRAWINGS PRIOR TO SUBMITTAL AND REVIEW BY THE ENGINEER OF RECORD ALLOWING FOR A TURN AROUND TIME OF AT LEAST 7 DAYS.

SHOP DRAWING SUBMITTALS PROCESSED BY THE ENGINEER OF RECORD ARE NOT CHANGE ORDERS. THE PURPOSE OF SHOP DRAWING SUBMITTALS BY THE CONTRACTOR IS TO DEMONSTRATE TO THE ENGINEER THAT THE CONTRACTOR UNDERSTANDS THE DESIGN CONCEPT. THE CONTRACTOR DEMONSTRATES THIS UNDERSTANDING BY INDICATING WHICH MATERIAL THEY INTEND TO FURNISH AND INSTALL AND BY DETAILING THE FABRICATION AND INSTALLATION METHODS THEY INTEND TO USE. IF DEVIATIONS, DISCREPANCIES, OR CONFLICTS BETWEEN SHOP DRAWING SUBMITTALS AND THE CONTRACT DOCUMENTS ARE DISCOVERED EITHER PRIOR TO OR AFTER SHOP DRAWING SUBMITTALS ARE PROCESSED BY THE ENGINEER, THE DESIGN DRAWINGS AND SPECIFICATIONS SHALL CONTROL AND SHALL BE FOLLOWED.
12.

INSPECTION: CONCRETE CONSTRUCTION,

SHALL BE SUPERVISED IN ACCORDANCE WITH SECTION 109, SECTION 1704, AND SECTION 1708 OF THE INTERNATIONAL BUILDING CODE AND THE PROJECT SPECIFICATIONS BY A QUALIFIED TESTING AGENCY DESIGNATED BY THE PROJECT REPRESENTATIVE. THE PROJECT REPRESENTATIVE SHALL BE FURNISHED WITH COPIES OF ALL INSPECTION REPORTS AND TEST RESULTS.

13.

STATEMENT OF SPECIAL INSPECTIONS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 1705 OF THE 2006 IBC AS FOLLOWS:

A.

THE FOLLOWING SYSTEMS WILL BE SUBJECT TO THE SEISMIC QUALITY ASSURANCE:  
SPECIAL REINFORCED CONCRETE WALLS  
CONCRETE FOUNDATIONS

B.

SPECIAL INSPECTION AND TESTING OF SPECIAL REINFORCED CONCRETE WALLS AND CONCRETE FOUNDATIONS SHALL COMFORM TO IBC SECTION 1708.

C.

THE TYPE AND FREQUENCY OF TESTING REQUIRED SHALL BE PER IBC SECTION 1708 AND 1704.

D.

THE TYPE AND FREQUENCY OF SPECIAL INSPECTIONS REQUIRED SHALL BE PER IBC SECTION 1707 AND 1704.

E.

THE REQUIRED FREQUENCY AND DISTRIBUTION OF TESTING AND SPECIAL INSPECTION REPORTS SHALL BE THE RESPONSIBILITY OF THE INSPECTION/TESTING AGENCY. REPORTS SHALL BE SUBMITTED TO THE PROJECT REPRESENTATIVE OF RECORD WITHIN 14 DAYS OF INSPECTION.

F.

STRUCTURAL OBSERVATION OF THE LATERAL AND GRAVITY STRUCTURAL SYSTEMS SHALL OCCUR AT APPROPRIATE INTERVALS DURING CONSTRUCTION. THE PROJECT REPRESENTATIVE SHALL OBSERVE THAT THE WORK IS PROGRESSING IN GENERAL CONFORMANCE WITH THE CONTRACT DOCUMENTS AND ACCORDING TO THE DESIGN INTENT.

G.

A STRUCTURAL OBSERVATION REPORT SHALL BE SUBMITTED TO THE PROJECT REPRESENTATIVE AFTER EACH OBSERVATION.

GEOTECHNICAL

14.

FOUNDATION AND SLAB NOTES: SUB-GRADE PREPARATION INCLUDING DRAINAGE, EXCAVATION, COMPACTION, AND FILLING REQUIREMENTS, SHALL CONFORM STRICTLY WITH RECOMMENDATIONS GIVEN IN THE SOILS REPORT OR AS DIRECTED BY THE PROJECT REPRESENTATIVE.

FOOTINGS SHALL BEAR ON SOLID UNDISTURBED EARTH (CONTROLLED, COMPACTED STRUCTURAL FILL OR BOTH) AT LEAST 18" BELOW LOWEST ADJACENT FINISHED GRADE. FOOTING DEPTHS/ELEVATIONS SHOWN ON PLANS (OR IN DETAILS) ARE MINIMUM AND FOR GUIDANCE ONLY. THE ACTUAL ELEVATIONS OF FOOTINGS MUST BE ESTABLISHED BY THE CONTRACTOR IN THE FIELD WORKING WITH THE TESTING LAB SOILS ENGINEER. BACKFILL BEHIND ALL RETAINING WALLS WITH FREE DRAINING GRANULAR FILL AND PROVIDE FOR SUBSURFACE DRAINAGE AS NOTED IN THE SOILS REPORT.

ALLOWABLE SOIL PRESSURE3000 PSF  
LATERAL EARTH PRESSURE (RESTRAINED/UNRESTRAINED)60 PCF/35 PCF

SOILS REPORT REFERENCE:

CONCRETE

15.

CONCRETE SHALL BE MIXED, PROPORTIONED, CONVEYED AND PLACED IN ACCORDANCE WITH IBC SECTION 1905 AND ACI 301. CONCRETE SHALL ATTAIN A 28-DAY STRENGTH OF f'c = 3,000 PSI AND MIX SHALL CONTAIN NOT LESS THAN 5-1/2 SACKS OF CEMENT PER CUBIC YARD AND SHALL BE PROPORTIONED TO PRODUCE A SLUMP OF 5" OR LESS.

THE MINIMUM AMOUNTS OF CEMENT AND MAXIMUM AMOUNTS OF WATER MAY BE CHANGED IF A CONCRETE PERFORMANCE MIX IS SUBMITTED TO PROJECT REPRESENTATIVE TWO WEEKS PRIOR TO PLACING ANY CONCRETE. THE CONCRETE PERFORMANCE MIX SHALL INCLUDE THE AMOUNTS OF CEMENT, FINE AND COARSE AGGREGATE, WATER AND ADMIXTURES AS WELL AS THE WATER CEMENT RATIO, SLUMP, CONCRETE YIELD AND SUBSTANTIATING STRENGTH DATA IN ACCORDANCE WITH ACI 318 SECTION 5.3. REVIEW OF MIX SUBMITTALS BY THE PROJECT REPRESENTATIVE INDICATES ONLY THAT INFORMATION PRESENTED CONFORMS GENERALLY WITH CONTRACT DOCUMENTS. CONTRACTOR OR SUPPLIER MAINTAINS FULL RESPONSIBILITY FOR SPECIFIED PERFORMANCE.

ALL CONCRETE WITH SURFACES EXPOSED TO STANDING WATER SHALL BE AIR-ENTRAINED WITH AN AIR-ENTRAINING AGENT CONFORMING TO ASTM C260-01, C494M-05a, C618-03, C989-05 AND C1017M-05. TOTAL AIR CONTENT SHALL BE IN ACCORDANCE WITH ACI 318 TABLE 4.2.1.
14.

REINFORCING STEEL SHALL CONFORM TO ASTM A615 (INCLUDING SUPPLEMENT S1), GRADE 60, fy = 60,000 PSI. EXCEPTION: ANY BARS SPECIFICALLY NOTED ON THE DRAWINGS AS "GRADE 40", fy = 40,000 PSI. GRADE 60 REINFORCING BARS INDICATED ON DRAWINGS TO BE WELDED SHALL CONFORM TO ASTM A706. REINFORCING COMPLYING WITH ASTM A615(S1) MAY BE WELDED ONLY IF MATERIAL PROPERTY REPORTS INDICATING CONFORMANCE WITH WELDING PROCEDURES SPECIFIED IN A.W.S. D1.4 ARE SUBMITTED.

WELDED WIRE FABRIC SHALL CONFORM TO ASTM A-185.
15.

REINFORCING STEEL SHALL BE DETAILED (INCLUDING HOOKS AND BENDS) IN ACCORDANCE WITH SP-66 (04), ACI DETAILING MANUAL AND THE LATEST EDITION OF ACI 318. LAP ALL CONTINUOUS REINFORCEMENT 30 BAR DIAMETERS OR 2'-0" MINIMUM. PROVIDE CORNER BARS AT ALL WALL AND FOOTING INTERSECTIONS. LAP CORNER BARS 30 BAR DIAMETERS OR 2'-0" MINIMUM. LAP ADJACENT MATS OF WELDED WIRE FABRIC A MINIMUM OF 8' AT SIDES AND ENDS.

NO BARS PARTIALLY EMBEDDED IN HARDENED CONCRETE SHALL BE FIELD BENT UNLESS SPECIFICALLY SO DETAILED OR APPROVED BY THE PROJECT REPRESENTATIVE.
16.

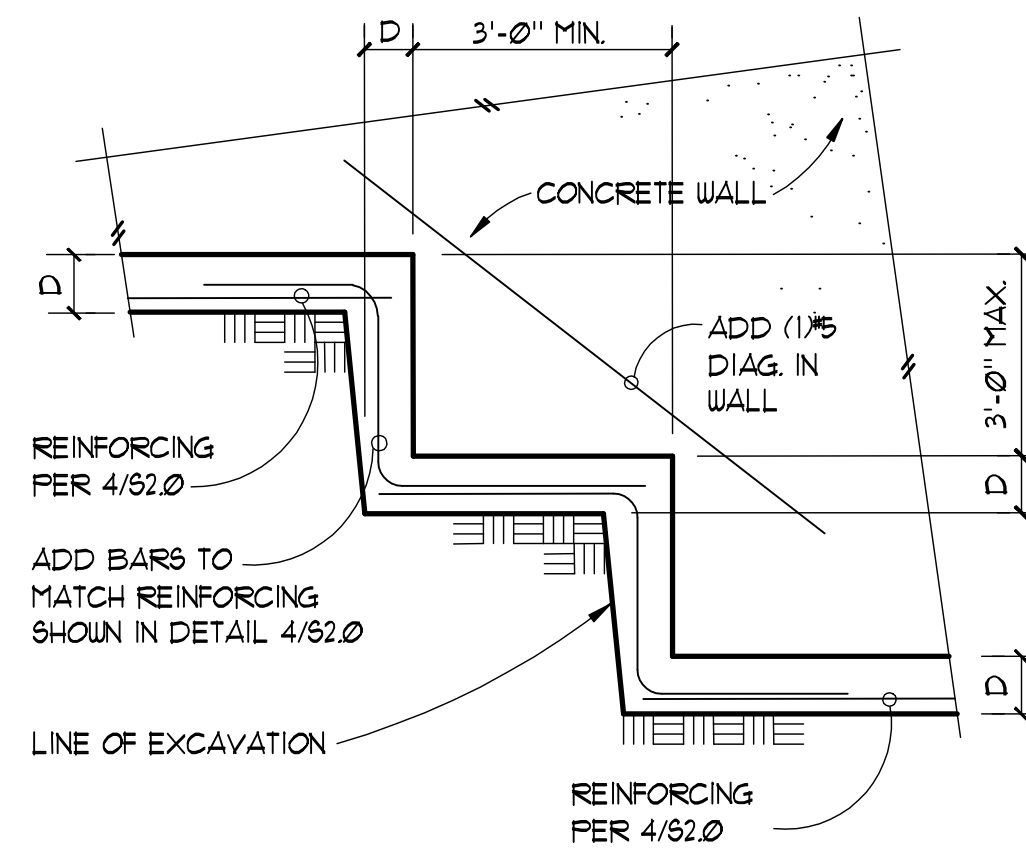
CONCRETE PROTECTION (COVER) FOR REINFORCING STEEL SHALL BE AS FOLLOWS:

FOOTINGS AND OTHER UNFORMED SURFACES, EARTH FACE3"  
FORMED SURFACES EXPOSED TO EARTH (i.e. WALLS BELOW GROUND) OR WEATHER2"  
(#6 BARS OR LARGER)  
(#5 BARS OR SMALLER)1 1/2"

INSPECTIONS

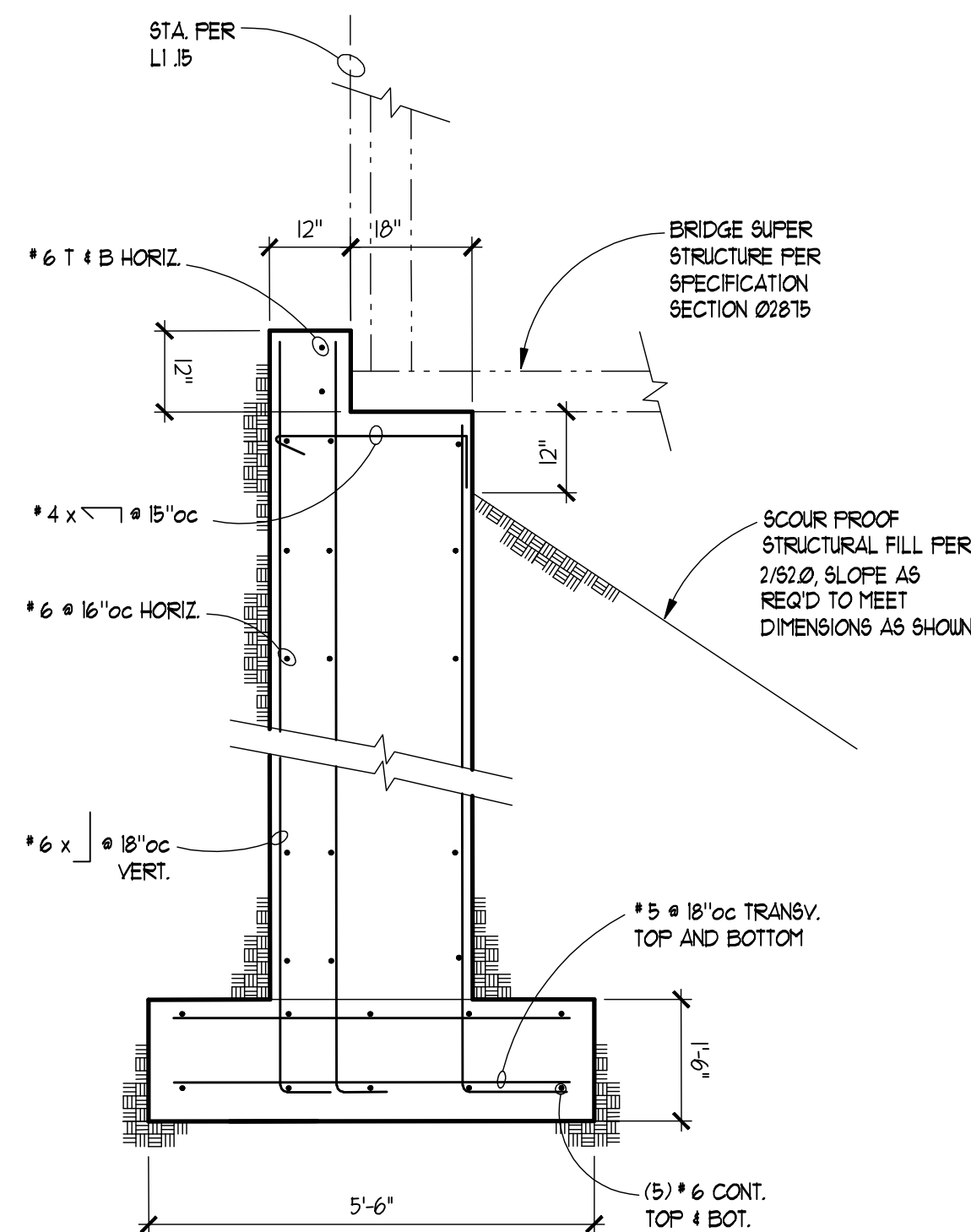
BID SET

REVISIONS:	DATE	 <b>King County</b> <b>DEPARTMENT OF NATURAL RESOURCES AND PARKS</b>  <b>201 S. JACKSON STREET</b> <b>SUITE 700</b> <b>SEATTLE, WA 98104</b>	 <b>MacLeod Reckord</b> PLLC <b>Culman Building</b> <b>91 Marion Street</b> <b>Seattle, Washington 98104</b> <b>206-465-7710</b> <b>FAX 206-465-6262</b>	  <b>I.L. GROSS</b> <b>Structural Engineers</b> <b>207 First Avenue So. Suite 250</b> <b>Seattle, WA. 98104</b> <b>(206) 623-0769 Fax:(206) 623-9081</b>			<b>BURKE-GILMAN TRAIL REDEVELOPMENT</b>							
							<table><tr><td>SCALE:</td><td rowspan="5"><b>LYON CREEK BRIDGE</b> <b>GENERAL STRUCTURAL</b> <b>NOTES</b></td><td rowspan="5"><b>SHEET</b> <b>S1.0</b></td></tr><tr><td>DATE: <b>10-21-10</b></td></tr><tr><td>DRAWN BY: <b>KJT</b></td></tr><tr><td>CHECKED BY: <b>VM</b></td></tr><tr><td>JOB NO: <b>05111</b></td></tr></table>	SCALE:	<b>LYON CREEK BRIDGE</b> <b>GENERAL STRUCTURAL</b> <b>NOTES</b>	<b>SHEET</b> <b>S1.0</b>	DATE: <b>10-21-10</b>	DRAWN BY: <b>KJT</b>	CHECKED BY: <b>VM</b>	JOB NO: <b>05111</b>
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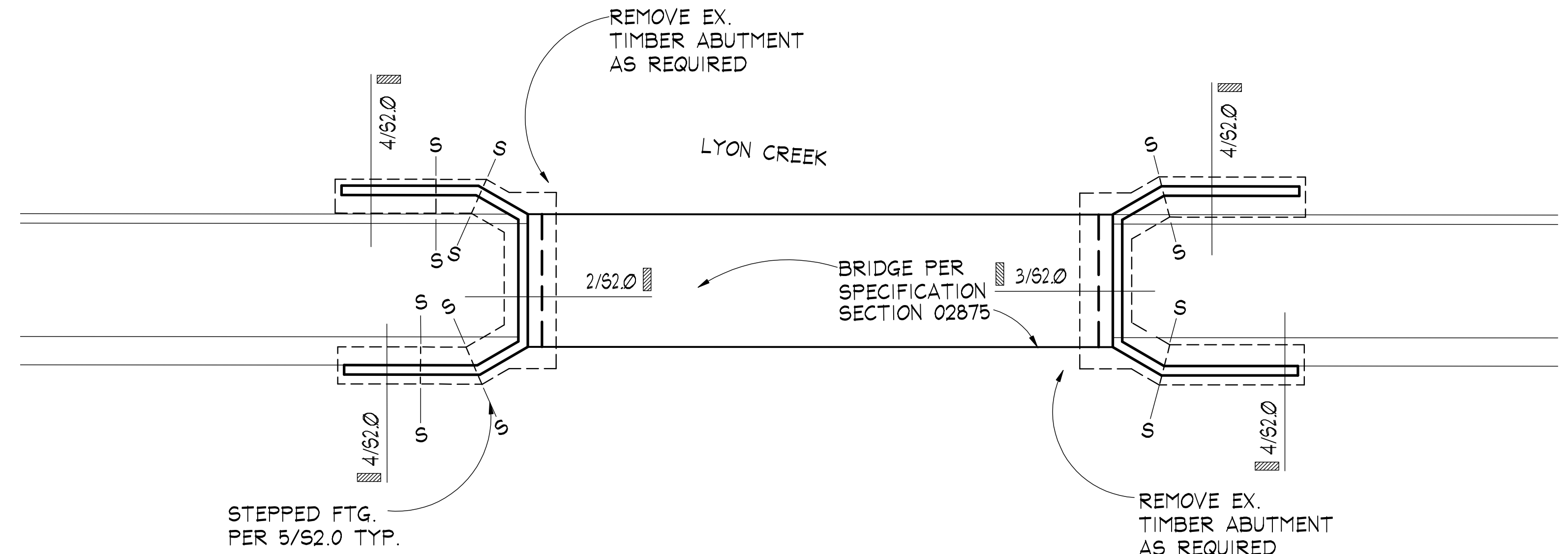
## 5 STEPPED FOOTING

Scale: 1"=10'-0"



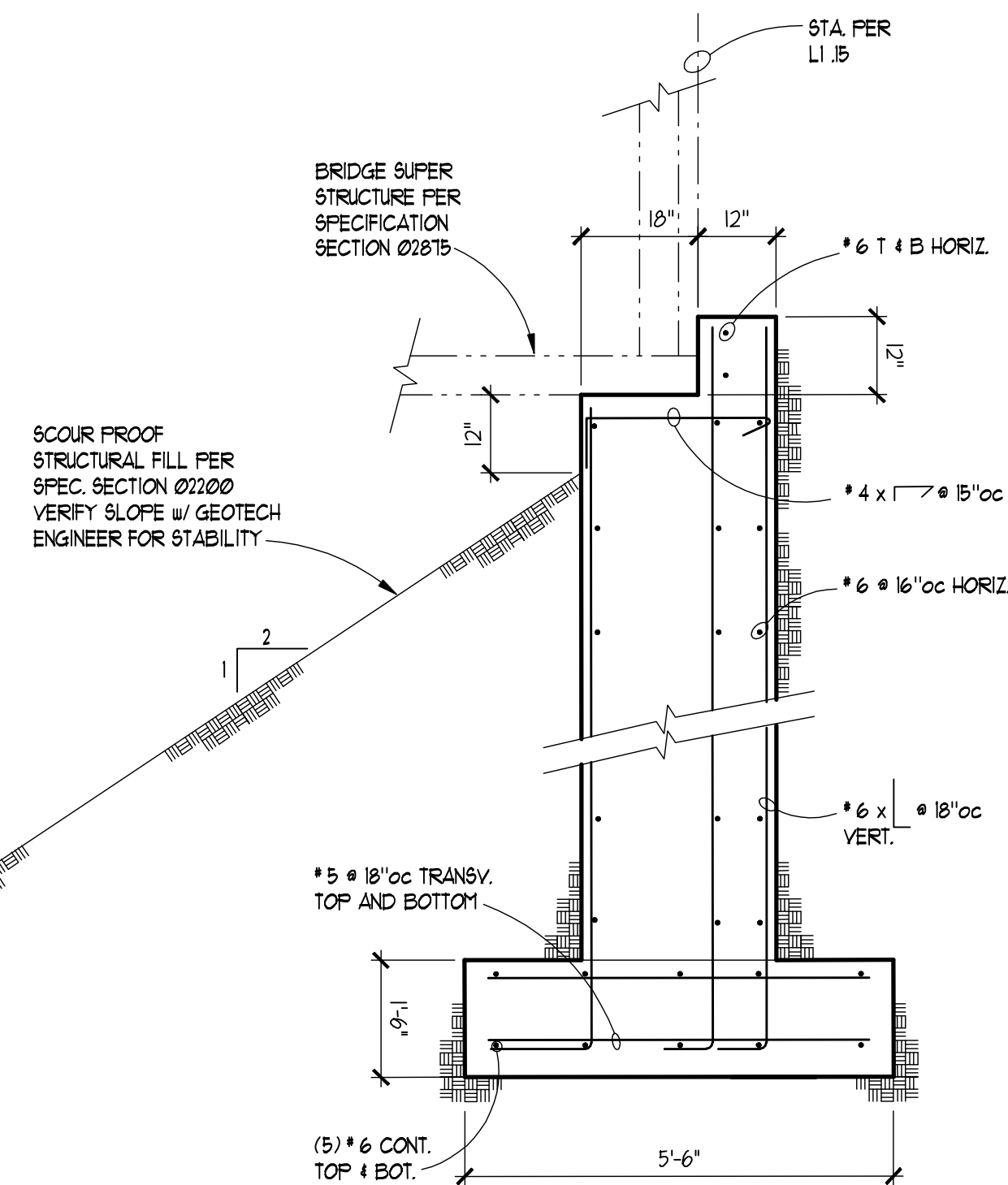
## 2 SECTION THROUGH ABUTMENT

Scale: 1/2"=1'-0"



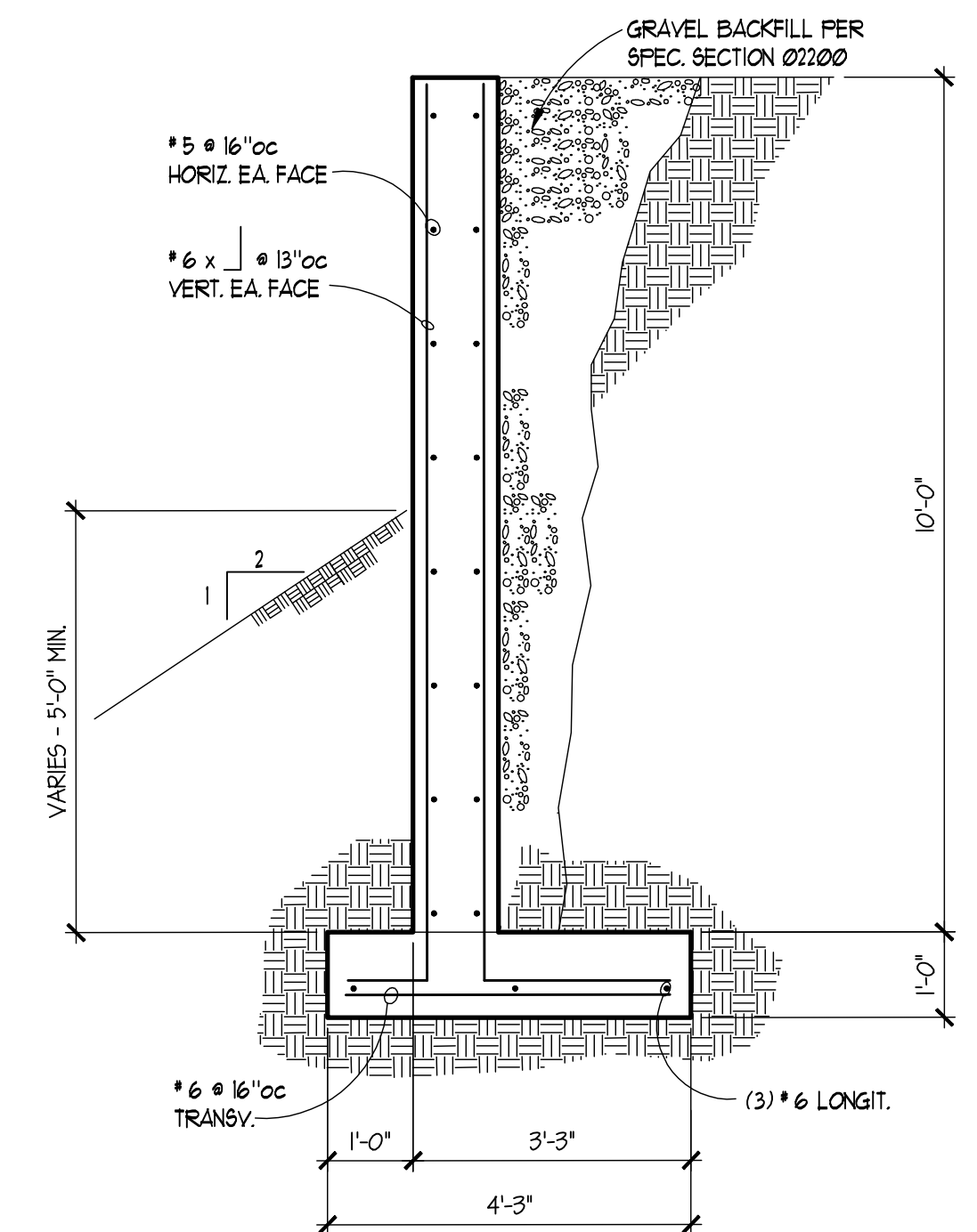
## 1 NEW BRIDGE RETAINING WALL

Scale: 1"=10'-0"



## 3 SECTION THROUGH ABUTMENT

Scale: 1/2"=1'-0"



## 4 SECTION THROUGH RETAINING WALL

Scale: 1/2"=1'-0"

REVISIONS:	DATE

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BURKE-GILMAN TRAIL REDEVELOPMENT		
SCALE: <b>AS NOTED</b>	<b>LYON CREEK BRIDGE</b>	
DATE: <b>10-21-10</b>	<b>ABUTMENT FRAMING</b>	
DRAWN BY: <b>KJT</b>	<b>PLAN AND DETAILS</b>	
CHECKED BY: <b>VM</b>		
JOB NO.: <b>05111</b>		

BID SET

SHEET  
**S2.0**